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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,748	08/23/2001	Brenda K. Drake	STL9836/40046.139US1	4096

7590 07/08/2004
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EXAMINER
CHEN, TIANJIE

ART UNIT	PAPER NUMBER
2652	5

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/938,748

Applicant(s)

DRAKE ET AL.

Examiner

Tianjie Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-16 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-12 is/are rejected.
- 7) ☒ Claim(s) 6,7 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Final Rejection

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Boutaghou et al (US 5,550,690).

With regard to claim 1, Boutaghou et al shows a disc drive spindle motor assembly in Figs. 3 including: a cylindrical motor spindle hub 22 (Fig. 3; column 4, line 53) having an upwardly extending rim, the hub mounted to a spindle shaft 35; an information storage disc 27 mounted on the motor spindle hub; and an annular disc clamp 10 securing the information storage disc to the motor spindle hub, the clamp having an annular web portion with a series of inwardly extending tabs 12 (Figs. 1 and 3) fitted around the motor spindle hub rim contacting an upwardly extending surface of the rim to center the disc clamp on the cylindrical hub, the tabs projecting from an inner edge of the web portion toward the rim; inherently top edge of each tab having been rounded to certain degree during manufacturing for removing burrs, which reduces contact with the rim when the disc clamp is secured to the cylindrical hub.

With regard to claim 9, Boutaghou et al shows a disc clamp 10 for securing an information storage disc 27 to a motor spindle hub 22 in a disc drive, the disc clamp including: a web portion having inner edge with a series of equidistantly spaced inwardly extending tabs 12, each tab having a chamfered top edge; and a peripheral

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ring portion 18 for contacting a top surface of an information storage disc; wherein the chamfered top edge of each tab reduces contact with the motor spindle hub when the disc clamp secures the information storage disc to the motor spindle hub.

With regard to claims 2 and 10, Boutaghou et al further shows that the tabs 12 are located equidistant from each other around the inner edge of the web portion of the disc clamp (Fig. 1).

With regard to claim 3, Boutaghou et al further shows that there are three tabs.

With regard to claim 8, Botaghou et al further shows that a clamp with inner edge of the web portion moves downward and away from the spindle shaft with tab 12 during installation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boutaghou et al in view of Renken (US 6,594,109).

The applied reference has a common assignee and one common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any

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invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

With regard to claims 5 and 12, Boutaghou et al does not show the disc clamp has a series of upwardly extending pressure lobes located from a peripherally located ring, the pressure lobes, which would spread the downward force on the information storage disc by the disc clamp.

Renken shows the disc clamp in Fig. 3 has a series of upwardly extending pressure lobes 196 located from a peripherally located ring, the pressure lobes, which would spread the downward force on the information storage disc by the disc clamp (Column 6, lines 24-26).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to add the lobes taught by Renken into Boutaghou et al's device. The rationale is as follows: Renken teaches that the lobes would spread the

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downward force on the information storage disc by the disc clamp. One of ordinary skill in the art would have been motivated to add the lobes to spread the force.

3. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boutaghou et al in view of Applicant Admitted Prior Art (AAPA).

With regard to claims 4 and 11, Boutaghou et al shows a disc clamp as described above, but does not show that the disc clamp is stamped from sheet metal.

However, AAPA disclosed that "the substantially less expensive leaf spring disc clamp, stamped from sheet metal, has become popular, and relatively prominent type of clamp used within the disc drive industry" (Specification, p. 2, lines 7-9). One of ordinary skill in the art would have been motivated by AAPA to include an option of stamping the clamp from sheet metal.

Allowable Subject Matter

4. Claims 14-16 are allowed.

Claims 6, 7, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

- With regard to claim 6, as the closest reference, Boutaghou et al (US 5,550,690) shows a disc drive spindle motor assembly including: an annular disc clamp having an annular web portion with a series of inwardly extending tabs; **but fails to show** that the web portion and the top surface of the spindle each defines a series of equidistantly spread screw holes for receiving a series of

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screws to secure the disc clamp to the spindle hub, wherein the number of screw holes is equal the number of tabs in the web portion.

- With regard to claim 13, as the closest reference, Boutaghou et al (US 5,550,690) shows a disc drive spindle motor assembly including: an annular disc clamp having an annular web portion with a series of inwardly extending tabs; **but fails to show** that the web portion is substantially parallel to the top surface of the information storage disc.
- With regard to claims 14, Boutaghou et al (US 5,550,690) shows a means for clamping a disk, which includes: an annular disc clamp having an annular web portion with a series of inwardly extending tabs; **but fails to show** that the means further includes the following features, and that the web portion and the top surface of the spindle each defines a series of equidistantly spread screw holes for receiving a series of screws to secure the disc clamp to the spindle hub, wherein the number of screw holes is equal the number of tabs in the web portion. that the web portion is substantially parallel to the top surface of the information storage disc.
- Applicant assumes that the clamp would have centering features for improved disc pack balance (Specification, p. 1, lines 8-9).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Response to Arguments

5. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


TIANJIE CHEN
PRIMARY EXAMINER